DOCUMENT RESUME

ED 210 106 PS 012 543

AUTHOR Morine-Dershimer, Greta; And Others
TITLE Participant Perspectives of Classroom Discourse. Part V: Attending to the Discourse of Classmates in Play Settings. Final Report.
INSTITUTION California State Univ., Hayward. Research Foundation.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 30 Mar 81
GRANT NIE-G-78-0161
NOTE 35p.; For related documents, see PS 012 539-544.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Age Differences; *Classroom Communication; Classroom Research; Communication Research; Comparative Analysis; *Discourse Analysis; Elementary Education; *Elementary School Students; Ethnic Groups; Longitudinal Studies; Low Income Groups; *Peer Relationship; *Play; Sex Differences; *Sociolinguistics

ABSTRACT

Part of a year-long sociolinguistic study of teacher and pupil perceptions of classroom discourse, this study presents data on pupil perceptions of discourse in play settings. Subjects were 165 pupils from six second, third, and fourth grade classrooms in a lower socioeconomic, multiethnic elementary school. In each of the six classrooms six children were randomly selected (stratified by sex and peer status) to form six play groups. Each group of children was then videotaped while playing with construction toys. Videotapes were played back in short segments to all of the pupils in the classroom to which the play group belonged. Following each videotaped segment, pupils were individually asked to report on "what they heard anyone saying" in that segment of the videotape. Data obtained was compared to data previously obtained during discourse in classroom settings. Findings indicated that certain language events or functions, such as attention-getting and information-giving, occurred frequently in both play and classroom settings. However, in both settings these events were not necessarily those most salient (i.e., most frequently "heard") to pupils. The data further show that peer status and sex are related to patterns of processing information in both lesson and play settings. Higher peer status subjects in both settings reported more total information (related to both language and the social context in which that language occurred). Girls appeared to be more alert than boys to the source of language in both settings, with girls reporting the comments of other girls significantly more often than those of boys, while boys showed no significant difference in reporting of girls' versus boys' comments. (Author/MP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED210106

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Final Report
Participant Perspectives of Classroom Discourse

Part V:

ATTENDING TO THE DISCOURSE OF CLASSMATES IN PLAY SETTINGS

Greta Morine-Dershimer
Margaret Lay-Dopyera
Patricia L. Graham

PS012543

This work was completed pursuant to grant #NIE-G-78-0161, awarded to the Research Foundation, California State University at Hayward. Submitted March 30, 1981.

ABSTRACT

This report presents data on one aspect of a year-long sociolinguistic study of participant perspectives of classroom discourse. The subjects were 165 pupils in six second, third, and fourth grade classrooms in a lower socio-economic, multiethnic elementary school. Pupil perceptions of language in home, school, and play settings were compared to arrive at a better understanding of pupil perceptions of classroom discourse.

This paper presents data gathered on perceptions of language in play settings. Six play groups, randomly selected from the six classrooms, and stratified by sex and peer status, were videotaped playing with construction toys. Videotapes were played back in short segments to classmates, who reported individually on "what they heard anyone saying" in the play setting. Ten outside observers, specialists and teachers in early childhood, also viewed the videotapes and reported their perceptions of the language and interaction observed.

Findings indicated that certain language events (functions) were important (occurred frequently) in both play settings and classroom discourse (e.g., attention-getting, information-giving, directing), but they were carried out (realized) very differently in the two settings. In both settings language events which occurred most frequently were not necessarily those which were most salient to pupils (i.e., reported as "heard" by pupils most often). Sex and status within the peer group were variables that appeared to affect children's processing of sociolinguistic information in similar ways both settings, but seemed to affect children's participation in discourse differently in the two settings. Observable differences in styles of interaction in the play groups (e.g., competitive vs. cooperative play; unimaginative vs. inventive use of materials) corresponded to observable differences in patterns of discourse in the classrooms from which the play groups were drawn.

It is concluded that: language production competencies that were practiced and developed in play groups were rarely built on or utilized in the classroom setting; language reception strategies that were effective or productive in play settings appeared to be somewhat counterproductive (with regard to final reading achievement) in the classroom setting; and interaction among children in play groups could provide valuable information about how communication skills learned in informal settings may affect communicative competence and reading achievement in the classroom. Further research in all these areas is recommended.

FOREWORD

This final report is organized into five separate parts, which are:

Part I: What Did Anybody Say? (salient features of classroom discourse)

Part II: Why Do You Ask? (interpretations of the question cycle)

Part III: Rules of Discourse, Classroom Status, Pupil Participation, and Achievement in Reading: A Chaining of Relationships.

Part IV: How Do We Know? (alternative descriptions of classroom discourse)

Part V: Attending to the Discourse of Classmates in Play Settings

Copies of other parts of this report can be obtained from Syracuse University at a nominal fee.

A number of people have contributed in a variety of ways to the conduct of the study and the preparation of the final report, and we are grateful to them all. Rosedith Sitgreaves of Stanford University gave us invaluable advice on questions of statistical analysis. Roger Shuy of Georgetown University and the Center for Applied Linguistics was a major consultant on the sociolinguistic analysis of the data and was assisted in his analyses by Steve Cahir, also of the Center for Applied Linguistics. Arnulfo Ramirez of the State University of New York at Albany conducted a sub-study that provided a speech act analysis of all thirty-six lessons. Margaret Lay-Dopyera of Syracuse University conducted a sub-study that provided a description of pupil's communication patterns in play settings.

Research assistants who bravely waded with us through the masses of data, contributing important ideas of their own along the way, included Mary Hamilton at the California State University at Hayward, and Gary Galluzzo, Fred Fagal, and Patricia Graham at Syracuse University. The hardy souls who sat on the floor talking with pupils throughout the school year of 1978-79,

and who enabled us to gather a wide variety of relevant data because they so quickly won the trust and cooperation of those pupils, were Susan Lytle, Kitty Norton, Stephanie Gannon, and Greg Nierman.

We wish to express our appreciation to Kent Viehoever and Virginia Koehler of the National Institute of Education for their advice and assistance in dealing with administrative idiosyncracies of the project, and to Harold Shatzen (Research Foundation, California State University at Hayward), William Hough, and William Wilson (Office of Sponsored Programs, Syracuse University) for their assistance in dealing with budget matters.

Production of this final report proceeded according to schedule because of the skillful typing of Laurie Battelle and Linda Wozniak. We are indebted to them for their cheerful assistance.

Most of all, we owe our thanks to the pupils and teachers of the "South Bay School," who shared with us their thoughts about language in classrooms, to the parents, who welcomed us in to their homes to videotape family conversations, and to the principal, who provided the support and resources to make us feel at home in his school. We have learned much from all of them, and will not soon forget any of them.

Greta Morine-Dershimer
(Syracuse University)

Morton Tenenberg
(California State University, Hayward)

TABLE OF CONTENTS

	Page
Introduction	1
Pertinent Findings from Main Study	1
Investigative Questions	3
Procedures	4
Subjects	4
Data Collection Procedures	4
Data Analysis Procedures	6
Findings	8
Predominant Language Events in Play Settings	8
Saliency of Language Events for Children	12
Pupil Status Variables and Information Load	14
Pupil Status Variables as Factors in Participation in Play Settings	18
Classroom Differences in Playgroup Interaction	20
Interpretations	23

INTRODUCTION

This report presents details of a sub-study on pupil perceptions of discourse in play settings, which was part of a year-long study of pupil and teacher perceptions of classroom discourse. The study was one of eight sociolinguistic studies funded by the National Institute of Education to examine the general problem of causes and effects of inadequate learning of the rules and processes of classroom discourse. Detailed findings from the study have been presented in the first four parts of this final report.

The study design involved a comparison of pupil perceptions of language in home, school, and play settings as a way of more accurately understanding pupil perceptions of classroom discourse. We found this procedure to be very productive. The plan was based on Stubbs' (1976) admonition that the study of language in education "should be based primarily on naturalistic observations and recording of language in real social situations: mainly in the classroom itself, but also in the home, and in the peer group, which is the most powerful linguistic influence on children (pg. 112)."

Pertinent Findings From Main Study

As the findings of the main study unfolded, we became more and more impressed with the idea that the peer group was the "most powerful linguistic influence on children." We found, for example, that when children were asked, "Who do you mostly talk with at home," 57% answered "my brother" or "my sister," while only 31% said "my mother," and only 12% said "my father."

There was also evidence to suggest that peer status was a factor in use of language between peers. When children were asked, "What do you say when you want to get your friend's attention (or "get your friend to do something")," and "What does your friend say when (s)he wants to get your attention (or "get you to do something")," the sentences they generated showed that different forms of address were used, dependent upon the child's status within the peer

group. For both functions, pupils low in status with their peers tended to attribute forms indicative of lower relative status to themselves, and forms indicative of higher relative status to their friends (e.g., "I say, Do you want to ride bikes?"; "My friend says, Give me the ball."). Pupils high in peer status tended to generate sentence forms for "getting someone to do something" that indicated their higher relative status, but used more nearly equal status forms for "getting someone's attention." (See Part III for more detail.)

Perhaps most important of all was the evidence that the peer group and peer status were important factors in pupil attention to classroom discourse. Although teacher talk predominated in lessons, pupils reported hearing the responses of other pupils proportionately more than teacher questions ($p < .001$). (See Part IV for more detail.) In addition, there were peer status differences in patterns of attention, with pupils of higher peer status reporting more pupil answers than pupils of low or middle status ($p < .05$), and also reporting more total information (e.g., adding information on social context, who said what to whom, in reporting the actual language heard) when asked what they heard anyone saying in the lesson ($p < .02$). (See Part I for more detail.)

We were interested to note that, while peer status was related to pupil attention patterns in classroom lessons, it was not related to their participation patterns. Pupils high in peer status were no more apt to contribute comments in class discussions than pupils low in peer status. This was in sharp contrast to most other classroom status variables. Sex, entering reading achievement, and status with teacher were all significantly related to participation in class discussions. Boys participated more than girls ($p < .01$), pupils high in entering reading achievement participated more than those low in achievement ($p < .025$), and pupils high in status with the teacher participated more than those low in status ($p < .025$). (See Part III for more detail).

There were certain indications that patterns of language use among peers were quite different from patterns of discourse in lessons. For example, the

question-response-react cycle identified so frequently in the literature on classroom interaction (Bellack, 1966; Mehan, Cazden, Coles, Fisher & Maroules, 1976) clearly accounted for most of the language in the lessons examined in this study, yet when children described what kinds of things they did and said while playing with their friends at home and at school, 72% of them reported various forms of directives, or attempts to influence playmates, while only 4% reported asking for information, and only 6% reported giving information. Our initial observations of the videotapes of play groups seemed to corroborate the children's reports, at least in part. Our impression was that getting the attention of others and attempting to direct or influence others were the two principle language functions in which children were engaged in these play groups. Questions occurred very infrequently.

Investigative Questions

Putting these findings and impressions together, we were led to ask the following questions:

1. Since children's reports seem to indicate that language events which predominate in play settings are different from those which predominate in lessons, can clear patterns of predominant language events in play settings be identified by outside observers, and, if so, are these patterns in reality different from the patterns of classroom discourse?

2. Since the language events which predominate in lessons (e.g., teachers' opening moves) are apparently not the events which are most salient to pupils, will the language events which predominate in play settings also be different from those which predominate in children's reports of what they hear being said?

3. Since peer status is apparently an important factor in pupil patterns of processing information in classroom discourse, will it also be an important factor in patterns of processing information from conversations in play groups?

4. Since peer status is apparently not an important factor in participation in classroom discussions, but sex is, will these pupil status variables be factors in participation in play groups?

The final question of interest to us in this report derives from the fact that we found several differences among classrooms with regard to patterns of discourse. These differences were related to differences in pupil perceptions

of the functions of language events, and also, for at least two classrooms, related to differences in final reading achievement "gains." (See Part II for further detail.) We wondered whether differences in patterns of classroom discourse might be reflected in patterns of interaction in the play groups which were drawn from these classrooms. Accordingly, we asked:

5. Can play groups be readily differentiated by outside observers with regard to certain types of interaction, and if so, do these differences appear to be tied to differences in patterns of classroom discourse?

PROCEDURES

Subjects

The subjects of this sub-study are 165 children in six second, third, and fourth grade classrooms, in a single school located at the southern end of the San Francisco Bay. The school is located in a lower socioeconomic, multiethnic, urban area, consisting mainly of small, single family dwellings. Stable, two parent families predominate, and the school population is also remarkably stable for a lower SES community. About 45% of the pupils are Mexican-American, 32% are Anglo, 11% Black, and 9% other minority groups, including primarily children of Asian and Portuguese extraction. The school appears to us to be well integrated, with numerous friendship choices that cross ethnic "lines."

A special subset of subjects includes the 36 children who participated in the six play groups under study here. In each of the six classrooms six children were randomly selected (stratified by sex and peer status) to form a play group. An attempt was also made to reflect the multiethnic character of the classrooms in these play groups.

Data Collection Procedures

The basic data collection procedure for this sub-study involved videotaping each of the six play groups identified above. In February, each play group was taken out of the classroom and brought into the music room. The floor had been covered with rugs, and a variety of construction toys (e.g., wooden blocks, "nesting" plastic cubes, Lincoln logs, colored pipe cleaners) were distributed

around a central area of the room. A television camera was set up in one corner of the room. Children were told that they could use any of the construction toys in any way they chose, and that the camera would videotape their play. (By this point in the year children were quite accustomed to having lessons videotaped regularly in their classrooms.) The videotape recorder was then turned on, and allowed to run for thirty minutes. The researcher remained in a far corner of the room for part of the play session, and wandered out of the room to the adjoining stage for part of the time.

The videotapes thus obtained were edited to about 12 minutes in length, with segments selected on the basis of two criteria: clarity of the children's conversation; and inclusion of a variety of the activities which had occurred during the 30 minutes. Each edited videotape was played back in small group settings for all of the pupils in the classroom to which the play group belonged. Each tape was played back in three 4-minute segments (approximate), and typically each segment involved a different play activity. After each segment each pupil was asked individually by a researcher, "What did you hear anybody saying in that part?" The pupil's response was printed verbatim on a 3 x 5 card, and the researcher then asked, "What else did you hear anybody saying?" This continued until the child could think of no more responses. The next segment of the tape was then played, and the procedure repeated.

Prior to the videotaping of play groups (in January) information was gathered on pupil status in the peer group within each classroom. Each child was individually presented with an array of photographs of children in the class, given a series of scenarios, and asked to select the three children most likely and least likely to fit each scenario. The episodes involved selection of a team for a sports contest, selection of a team for a TV quiz show, identification of the children who would be likely (or unlikely) to take charge and know what to do if there were an accident in the room and no adults were around, and identi-

fication of the children who would probably be observed "hanging around" with the pupil if (s)he were followed for a week. Composite scores were developed for each pupil according to how frequently (s)he was mentioned under "most likely" and "least likely" categories, and within each classroom pupils were classified as high, middle, or low in peer status, on the basis of these composite scores.

Data Analysis Procedures

A category system was developed to reflect the types of language which children reported in response to the question, "What did you hear anybody saying?" The categories which emerged were then checked against a system developed to describe children's actual patterns of language in play groups (Wood, 1977), and found to be roughly similar. The categories included:

1. Word Play (e.g., "Monkey bars. Monkey see, monkey do, I see a monkey...;" "Any kind of an-i-mal; any kind of an-i-mal.");

2. Attention-Getting (e.g., "Lookit, it's a monkey bar;" "Look, Brian, a windmill;" "Look at me, I'm Superman.");

3. Information-Seeking (e.g., "What is it?" "Did you see 'Heaven Can Wait'?" "Do you want a hat on the snake, Manny?");

4. Information-Giving (e.g., "This is how worms are, but they aren't this color;" "When I went to catechism, a little boy got lost and he was crying.");

5. Directing/Influencing (e.g., "Hey you guys, let's knock Nacho's airplane down;" "Don't do that, Danny;" "Let's make a building.");

6. Teasing/Taunting (e.g., "The boys beat the girls;" "Kiss Christina;" "You're a fat Superman."); and

7. Approving/Congratulating (e.g., "That's real tall!" "You got it, Delia!")

All of the play group language reported as heard by pupils was coded, using this category system. Coding was done independently by two separate coders. Intercoder agreement was .87. When all pupil responses had been coded, the total frequencies and proportions for each category were calculated by classroom. The Friedman two-way analysis of variance by ranks was used to determine whether the types of language most frequently reported were similar across class-

rooms (play groups).

For the subset of pupils who were participants in the playgroups, two additional analyses were carried out. First, for each pupil participant a measure of "information load" was obtained. This measure was determined by counting each separate report of actual language heard as one item of information, and adding one item of information for each report of the social context in which the language occurred (e.g., who said it, who it was said to, what was said in reply). Thus, if after viewing a "sword fight" held with Lincoln logs, a pupil reported hearing, "On guard!" it was counted as one item of information. If another pupil reported that "Ray said 'On guard' to Gavino," it was counted as three items of information.

Second, for each pupil participant a measure of the number of playmates cited as "sources" was obtained. This measure could range from zero to five, since each play group included six children. Citing oneself as a source of the language reported was not counted. Analysis of variance was used to determine whether these two measures varied by sex or peer status of the participants.

For purposes of describing the actual language behavior in the play groups, we would have preferred having a sociolinguist analyze the videotapes in detail, as we did with the classroom language tapes. Even preparing transcripts of the interaction would have been prohibitively time-consuming, since several children were frequently talking at once, and much of the interaction was nonverbal. Since this was only a sub-study we could not afford such a detailed analysis. Instead we used ratings by ten independent outside observers, all of whom were experienced and knowledgeable observers of young children (four professors of human development, three classroom teachers of primary grade children, and three doctoral students in early childhood education). These outside observers first viewed the initial three to five minutes of a videotaped play session in order to get oriented to the play group and identify the six children

in the group by name. They were given no information about the children other than their names and grade level. The videotape was then played in its entirety (12 minutes) and observers were asked to guess the identities of the girls and the boys who were high and low in peer status. The videotape was again played in its entirety, and the observers were asked to rank the seven types of language events reported by pupils (word play, attention-getting, information-seeking, information-giving, directing/influencing, teasing/taunting, and approving/congratulating) in terms of the frequency with which these events had occurred in that play setting. Finally, the observers were asked to rate the play group on a five-point scale on the following dimensions: cooperative vs. competitive play; inventive vs. nonimaginative or routine use of materials; variation vs. repetitiveness of activities.

Each of these three sets of data from observers were placed in a ranked format, and the rankings were analyzed for agreement using the Kendall coefficient of concordance (W).

FINDINGS

In reporting the findings of this sub-study, we will address each of the five investigative questions in turn.

Predominant Language Events in Play Settings

The ten experienced observers who viewed the videotapes of play groups showed significant agreement in their rankings of types of language events by the frequency of their occurrence in each play setting. The Kendall coefficients of concordance for observations of each play group were as follows: Play group A, W=.437; Play group B, W=.444; Play group C, W=.629; Play group D, W=.285; Play group E, W=.929; Play group F, W=.375. Each of these coefficients is significant at $p < .01$.

As Siegel (1956) notes, it is suggested that "the best estimate of the 'true' ranking ... is provided, when W is significant, by the order of the various sums of ranks, R_j." Accordingly we have used R_j in determining whether

the observed patterns of language events are consistent across classrooms. Table 1 presents transformed R_js (the Kendall coefficient uses highest ranking as 1, while the Friedman two-way analysis of variance used lowest ranking as 1, so a transformation was performed to yield reciprocal sums of ranks), which have been used in a Friedman two-way analysis of variance by ranks. As noted in the table, x_r^2 is significant at $p < .001$.

Not only do the observers agree on the types of language events which are most and least frequent within each play setting, but across the six play settings there is significant agreement on the types of language events that predominate. The most frequently occurring language events, according to these observations, are Information-Giving, Attention-Getting, and Directing/Influencing. The least frequently occurring language events are Approving/Congratulating and Word Play. Thus, the evidence does corroborate children's reports pointing to attention-getting and directing/influencing as important language functions in play settings.

How different are these patterns from the patterns of classroom discourse? In these classrooms as in most, the predominant pattern is: teacher asks a question (Information-Seeking); children raise their hands(Attention-Getting); a child answers the question (Information-Giving); and the teacher may or may not react (possibly Approving). Frequently the teacher's opening move in this question cycle involves several speech acts that are appropriately called managing (Directing). (See Part IV of final report for further detail on how this pattern is played out in these particular classrooms.) Clearly, attention-getting, information-giving, and directing/influencing are important language functions in both classroom and play settings. But this is not to say that they operate similarly in both settings.

Attention-getting is primarily nonverbal in classrooms. "Raise your hand" is the most universally understood rule of classroom discourse (see Part III

TABLE 1

Observers' Rankings of Frequency
of Language Events Observed in Play Groups
(Transformed Sums of Rankings)

	Word Play	Attention-Getting	Information-Seeking	Information-Giving	Directing/Influencing	Teasing	Approving
Playgroup A	49	51	17	52	49	42	20
Playgroup B	34	57	28	56	49	40	16
Playgroup C	19	41	51	67	53	27	22
Playgroup D	38	42	29	46	46	58	21
Playgroup E	18	56	21	44	54	60	27
Playgroup F	37	42	45	65	41	20	30

$x_r^2 = 23.19$; df=6; $p < .001$

of final report). Attention-getting in these play groups was very verbal. The most frequently used words and phrases were: "Lookit;" "Hey, you guys;" "Kevin (or calling another child by name):" and "See what I'm making." These devices certainly did not guarantee the desired attention of playmates, and when attention was gained, it was fleeting. No one monitored the bids and distributed the attention among participants, as an effective teacher might. Each child dispensed his/her own attention to others, rarely in any equal fashion. The differences in attention-getting in the two settings are clear.

Information-giving by pupils is largely reactive in classroom discourse, i.e., it usually occurs in response to a teacher's question. One of the consequences of this is that pupil responses are rarely given in what teachers call "complete sentences." The information-giving in these play groups was rarely in response to questions, for few questions were asked. Rather, children volunteered information that they wanted to share with others. It is interesting to note that most of these utterances were "complete sentences," (and were reported back as such by children who observed the videotape). For example:

I'm gonna make a bridge.
I'm finished.
I'm building a trap for Bugs Bunny.
I'm going to make a colored snake.
This is the Lincoln log ride.
This is how the log ride goes.
It's my birthday tomorrow.
"Jade" starts with a J.
My mother's name isn't Karen.
These pipe cleaners are good for making bracelets.
It looks like a tower.
It's so high I can't reach the top.

In addition, much of the information shared is in the form of "participant informatives," i.e., the speaker includes him/herself in the statement. This is in contrast to discourse in these children's classrooms, where "non-participant informatives," (talking about objects, events, or concepts without personal reference) predominate. Clearly, information-giving is also very different in the two settings.

Directing/influencing is almost exclusively the teacher's prerogative in classroom discourse, but in the play setting everyone gets into the act. Children get a good deal of practice in this language function while interacting with peers, and as Wilkinson & Dollaghan (1979) note they are adept not only at "softening" the forms of their directives, they can also be skillful at indirect refusals to follow peer directives. Opportunity for pupils to use this communicative skill is not often present in teacher-directed lessons.

In sum, it would appear that while the types of language events that predominate in these play settings are also frequent events in the classroom discourse the children experience, the carrying out of the associated language functions is very different in the two settings. The communication skills which children may develop in the play setting are rarely exercised in the classroom lesson.

Saliency of Language Events for Children

The language events which pupils reported hearing after viewing videotape playbacks of play group interaction were coded using the same categories as the experienced observers used in rating frequency of language events. For each classroom proportions were derived by dividing the total number of responses in a particular category of language event by the total number of codable responses for that class. (Reports of single words out of sentence context could not be coded, e.g., ...footprints..., ...cowboy..., ...pancake...). Table 2 presents information on total codable responses and mean responses per pupil for each classroom. Table 3 presents the proportions of responses for each type of language event by classroom. The Friedman two-way analysis of variance by ranks indicates that patterns of reporting language events as "heard" are consistent across classrooms ($p < .001$).

The most frequently reported types of language events are Directing/Influencing and Information-Giving, and the least frequently reported are Approving and

TABLE 2
Numbers of Codable Reports of Language Events
(Totals and Means by Classroom)

	Number of Pupils Reporting	Total Codable Responses	Mean Number of Codable Responses per Pupil
Classroom A	25	290	11.60
Classroom B	24	250	10.42
Classroom C	27	254	9.41
Classroom D	29	363	12.52
Classroom E	24	308	12.83
Classroom F	25	406	16.24

TABLE 3
Proportions of Language Events Reported

	Word Play	Attention-Getting	Information-Seeking	Information-Giving	Directing/Influencing	Teasing	Approving
Classroom A	.141	.076	.048	.321	.397	.017	.000
Classroom B	.184	.112	.024	.140	.268	.272	.000
Classroom C	.020	.094	.059	.319	.370	.138	.000
Classroom D	.226	.041	.055	.215	.190	.267	.006
Classroom E	.305	.097	.071	.127	.328	.068	.003
Classroom F	.153	.102	.059	.227	.295	.159	.006

$x_r^2 = 22.99$; df=6; $p < .001$

Information-Seeking. There are certain obvious similarities and differences here with regard to the predominance of language events which are observed and the predominance of language events which are reported. To begin with, Information-Giving ranks first in observed language events and second in reported language events, while Approving ranks last in both observed and reported events. In these cases, language events seem to be attended to in rough proportion to the frequency of their occurrence.

This does not appear to be the case for Directing/Influencing, Word Play, or Attention-Getting events. Directing/Influencing ranks third in observed language events, but it is a strong first in events reported by children. Word Play ranks very low in observed events, but is clearly in the middle ranks of reported events. These types of language events appear to be attended to by children somewhat more than they actually occur. Attention-Getting, on the other hand, ranks second highest in observed events and third lowest in reported events. It would seem that attention-getting behavior fails to command the attention of children who view videotapes of play groups, much as it often fails to command the attention of the peers toward whom it is directed during play time. Perhaps reception skills which children learn and practice in play settings include being alert to attempts to influence them, and screening out attempts to get their attention.

Pupil Status Variables and Information Load

Reports by participants in the play groups of "what you heard anybody saying" were analyzed separately to determine whether relationships between pupil status variables and "information load" followed the same patterns in play settings as in classroom settings. Information load is a measure of the total information reported back by each pupil, including both actual language reported as heard and data on the social context in which that language occurred. In classroom lessons, sex was not related to variance in information load, but peer status

was, with pupils high in peer status reporting back larger amounts of information than pupils of low or middle status.

Table 4 presents mean information load for each sub-group of participants. Table 5 presents the analysis of variance data for these means. Peer status contributes significantly to the variance in information load ($p < .01$), but sex does not. Children of high peer status report back more information than children of middle or low status. The mean scores suggest that low status boys are quite different from other subgroups, but there are no significant contrasts at $p < .01$.

To focus more precisely on a particular aspect of information processed in the play setting, an additional analysis was made of participants' "citations" of other children in the group as sources of the language they reported. This involved simply noting how many other children in the group were cited as sources one or more times. No count was made of the total number of citations.

Table 6 presents mean numbers of sources cited for each subgroup of participants. Table 7 presents the analysis of variance data for these means. Sex contributes significantly to the variance in citing of peers as language sources ($p < .05$), but peer status does not. Girls cite other pupils as language sources more frequently than boys. Again, there are no significant contrasts.

These data suggest that peer status variables relate to the processing of sociolinguistic information in similar ways in both classroom and play settings. Citations of other pupils as sources was not examined in quite this way in lesson settings, but sex was a factor in the reporting of comments of other pupils, with girls reporting the comments of other girls significantly more often than those of boys, while boys showed no significant difference in reporting of girls' vs. boys' comments. (Morine-Dershimer, 1981). Thus, it would appear that girls process information from peers somewhat differently than boys in both classroom and play settings.

TABLE 4
Participant Reports of Language "Heard"
in Play Settings
(mean information load by sex and peer status)

	Low Peer Status (N=12)	Middle Peer Status (N=12)	High Peer Status (N=12)
Females (N=18)	22.25	23.00	34.25
Males (N=18)	14.08	23.33	30.92

TABLE 5
Analysis of Variance:
Participant Reports of Language "Heard"
in Play Settings

Source	df	ss	ms	F
Sex	1	124.70	124.70	1.398
Peer Status	2	1016.05	508.03	5.697**
Interaction	2	379.06	189.53	2.125
Within Groups	30	2675.00	89.17	
Total	35	4194.81		

** $p < .01$

TABLE 6
Participant Citations of Peers as
Language Sources in Play Settings
(mean sources cited by sex and peer status)

	Low Peer Status (N=12)	Middle Peer Status (N=12)	High Peer Status (N=12)
Females (N=18)	2.67	2.50	3.50
Males (N=18)	.67	2.33	1.67

TABLE 7
Analysis of Variance:
Participant Citations of Peers
as Language Sources in Play Settings

Source	df	ss	ms	F
Sex	1	16.00	16.00	5.84*
Peer Status	2	5.71	2.86	1.04
Interaction	2	6.19	3.10	1.13
Within Groups	30	82.32	2.74	
Total	35	110.22		

* $p < .05$

Pupil Status Variables as Factors
in Participation in Play Settings

The difficulty of transcribing verbal interaction in play group videotapes, and the amount of nonverbal interaction that occurred, have made it necessary to analyze "participation" in play settings in a rather different manner than participation in class discussions. In the latter case we used videotapes and transcripts to count the actual number of comments contributed by each pupil over six language arts lessons taught from September through January. Peer status did not contribute significantly to frequency of participation in class discussion, but sex did.

To examine the possible effects of these factors on "participation" in play groups, we have turned to more qualitative measures of participation. Our ten observers were asked to guess the identities of the high and low status boys and girls after viewing each videotape of children at play. They were also asked to indicate what cues they used for purposes of identification. Cues reportedly used for identification of high peer status children included: other children's acceptance of his/her suggestions or directions, other children seeking his/her attention, interaction with several other children, and playing actively. Cues reportedly used for identification of low peer status children included: playing alone, minimal verbal interaction with others, inability to get attention of others, and being teased by others.

Table 8 presents data on agreement among observers in identifying particular children as high or low status. In all instances but one there was significant agreement. As Siegel (1956) points out, agreement among raters does not always imply accuracy of rating. In this instance, we had a measure of peer status available to check observers' behavioral ratings against peer choices. In five out of six play groups the low status boy was significantly singled out and correctly identified by observers. In only one of these groups was the high status boy significantly singled out and correctly identified. In only two out of six play groups was the low status girl significantly singled out

TABLE 8
Agreement Among Observers
in Identifying High and Low Status
Participants in Play Groups
(Kendall coefficient of concordance)

	Playgroup A	Playgroup B	Playgroup C	Playgroup D	Playgroup E	Playgroup F
Boys	.19*	.49**	.49**	.48**	.52**	.84**
Girls	.37	.31	.67	.31*	.49	.52**

* $p < .05$
** $p < .01$

and correctly identified by observers, while in three other groups the high status girl was significantly singled out and correctly identified. It would appear, then, that low status boys were the most readily recognizable participants in these play groups, and that they did participate (were interacted with) differently in the play setting than any other subgroup of children. This suggests that low peer status may be a more critical factor for boys in play settings than for boys in classroom settings, or for girls in either play or classroom settings.

Classroom Differences
in Playgroup Interaction

Ten outside observers rated each play group on a five-point scale with regard to three dimensions of interaction: competitive vs. cooperative play; unimaginative vs. inventive use of materials; and repetitiveness vs. variation of activities. (Videotapes had been edited to display as much variation of play activities as possible; where little or no variation existed in the original tape it could not be displayed in the edited tape.) The Kendall coefficient of concordance was used to analyze these ratings (transformed to rankings). There was significant agreement among observers on ratings of the play groups for each play group on each of these interactions. The coefficients of concordance were: competitive vs. cooperative play, $W=.360$ ($p<.01$); unimaginative vs. inventive use of materials, $W=.356$ ($p<.01$); and repetitiveness vs. variation of activities, $W=.242$ ($p<.05$).

Table 9 presents the mean ratings for each play group on each of these dimensions. (Competitive, unimaginative, and repetitive play were all at the lower end of the rating scale.) The lowest mean rating on all three of the interactive dimensions is accorded to Playgroup E. (This group focused on building block towers for 30 minutes, with the major variation being a contest between boys and girls to build the highest tower. They "stole" each other's blocks, and knocked down each other's towers.) The highest mean rating on

TABLE 9
Mean Ratings of Play Groups
on Three Interactive Dimensions

	Competitive vs. Cooperative Play	Unimaginative vs. Inventive Use of Materials	Repetitiveness vs. Variation of Activities
Playgroup A	3.2	3.9	3.3
Playgroup B	3.3	2.9	2.8
Playgroup C	3.8	4.0	3.9
Playgroup D	2.8	3.4	3.1
Playgroup E	2.5	2.4	2.2
Playgroup F	4.2	3.7	3.2

cooperative play is given to Playgroup F, which falls in the middle range of ratings on the other two dimensions.

The highest mean ratings on inventive and varied play activities go to Playgroup C. Playgroup A is also very high on inventive play. (Group C organized and ran a series of running, squatting, and crawling races. Group A invented and played a game they called "Cat's Eye.") These four play groups stand out to the outside observers, then, with regard to the type of involvement in play that they exhibited.

It is interesting to note that the same four classrooms stand out with regard to our data on classroom discourse. Classrooms A and C, whose pupils display the most inventive play, according to our outside observers, were the classrooms whose discourse was described by our sociolinguistic analyst as the dullest and most routine of the six classrooms, with the "form of doing school" appearing to be more important to the teachers then any attempts to deal with content. (See Part I of final report for further detail.) This result may be surprising to some, but it follows a pattern identified by Elkind, Deblinger & Adler (1970), who found that children removed from uninteresting classrooms or activities were almost twice as "creative" on a variety of tests as children removed from interesting classrooms or activities.

Classroom E, whose pupils are rated lowest on all three dimensions of play, showed significantly lower final reading achievement (entering reading controlled for) than Classroom F, whose pupils are rated highest on cooperative play. Our sociolinguist distinguished between these two classrooms as well, pointing out that Teacher F conducted lessons that were rather like natural conversations, with "real" questions being asked, and children contributing information about their own experiences. Teacher E, on the other hand, tended to ask several children to respond to the same question, rarely identifying any response as best or most nearly accurate, and maintaining "iron-fisted

control of the topic." (See Part I of final report for more detail.)

A reexamination of Table 1 may provide some clues about the type of verbal interaction occurring in these two play groups which led observers to make these ratings of the two groups. The sums of rankings show Playgroup E to be considerably higher than F in relative frequency of teasing, while Playgroup F is markedly higher than E in information-seeking, information-giving, and word play. It seems possible that a more cooperative (or "natural") style of classroom conversation has carried over into the play setting for children from Classroom F, while a more competitive style of classroom interaction has carried over into the play setting for children from Classroom E.

INTERPRETATIONS

This special sub-study was undertaken because of some intriguing findings from the main study indicating the importance of the peer group, and of status in the peer group, in relation to children's processing of information in classroom settings. Several findings from the main study also suggested that children perceived differences between conversations in play groups and discourse in classrooms. The findings presented here are based on a very limited sample of play groups, yet we believe that they are suggestive of some potentially productive questions for future research.

The finding that important language functions, such as attention-getting, information-giving, and directing/influencing, are carried out quite differently in classroom lessons as opposed to play settings is not very surprising. However, many prior studies that have compared children's language in these two settings have focused on minority culture groups, suggesting that the differences found resulted from differences between minority and dominant cultures, and contributed singularly to the academic difficulties of minority group children (e.g., Philips, 1972; Boggs, 1972; Dumont, 1972). These data suggest that a more pervasive difference exists, the difference between the subculture of childhood and the dominant culture of adulthood. Most importantly for educators, perhaps, is

the fact that the communicative competencies which these children appear to be practicing and developing in play groups are rarely built on or utilized in the classroom setting.

The fact that there are important similarities in these children's patterns of language reception (or processing of sociolinguistic information) in classroom and play settings is the most interesting finding from our own point of view. It would appear that these children have learned certain skills of screening out language events which may predominate in frequency of occurrence but be perceived as less important for purposes of effective functioning in the setting (e.g., teacher questions* in lessons, and attention-getting of playmates in play settings). At the same time they have developed skill in attending to language events which may occur less frequently, but are perceived as quite important for effective functioning in the setting (e.g., pupil responses* to questions in lessons, and directing/influencing attempts of playmates in play settings).

The data show further that peer status and sex are related to patterns of processing information in both lesson and play settings. Participants of higher peer status report back more total information (language and social context) in both settings. Girls appear to be more alert than boys to the source of language in both settings, reporting back more comments of other girls than of boys in lessons, and citing more playmates as sources of language in play settings.

These findings suggest to us that while the language production skills which children practice in play settings may not be frequently used in classroom lessons, the language reception skills which they practice are being used.

* Our data on children's interpretations of the functions of question cycles suggest that questions serve to identify the topic that one needs to know about, while responses give the actual information which needs to be remembered. (See Part II of final report for more detail.)

And certainly, children are called on to be receivers of language in classroom lessons more frequently than they are called on to be producers of language. The question is, are these reception skills productive or effective in classroom lessons. The answer would seem to be in the negative, at least with regard to final reading achievement.

Findings in the main study indicated that, while higher attention to the responses of other pupils was associated with higher peer status ($p < .05$), higher attention to teacher questions was associated with higher entering reading achievement ($p < .001$). Higher "information load," which is characteristic of information processing in both play and lesson settings for children who achieve social success in the peer group, does not contribute significantly to final reading achievement, when entering reading is controlled for. Girls' alertness to language sources in both settings is apparently not an academically effective strategy either, for girls were significantly lower than boys in final reading achievement, when entering reading was controlled for ($p < .02$). (See Part III of final report for more detail on all of these relationships.)

The data from this study thus suggest that while children appear to be applying language reception strategies which they practice in play groups to the classroom lesson setting, these strategies may not be information processing strategies which lead to effective learning in the classroom setting. In fact, reception strategies which are effective in peer group settings may be counterproductive in lessons. The possibility of detrimental effects of peer interaction on the language development of young children has been raised by other studies (Bates, 1975; Nelson, 1973). Clearly, this is a matter which deserves further study.

Our findings in the main study indicated that participation in class discussions was a critical variable for academic success in these classroom settings. Participation in discussions contributed significantly ($p=.0027$) to the explained variance in final reading achievement, with entering reading controlled

for. (See Part III of final report.) Similarly, participation in play settings appears to be important for success in the peer group. In both settings there appears to be some interaction between sex and acquired status with regard to participation.

In our play groups, the boys of low peer status stand out to uninformed outside observers, because they interact and are interacted with very differently. They stay isolated from others, are ignored in their attempts to initiate interaction, and are frequently teased by others. Thus, we might say that boys who are less successful in the peer group participate less in the play group activities than other children. This is not true for girls of low peer status, who are not readily identified by the outside observers.

In classroom lessons, on the other hand, girls of high academic (entering reading) status stand out to the outside observer (coder of interaction), because they interact differently. They participate in class discussions significantly less frequently than high achieving boys ($p < .01$). Thus, girls who are more successful in the academic group participate less in lesson activities.

These rather different patterns of relationships among sex, status, and participation in lesson and play group settings appear to us to be rather paradoxical. We make no attempt to explain them at this point, but we do believe they deserve further investigation.

The findings presented here with regard to possible relationships between patterns of classroom discourse and types of interaction exhibited in play settings are also intriguing and, we believe, deserving of further study. We doubt that anyone would want to urge teachers to become more dull and routine in their lessons in an attempt to encourage more creative play among their pupils during free time. It would certainly be worth knowing, however, whether more "natural" conversational language in lessons is related to both increased academic learning and more cooperative play among children in other school settings. Our Teacher F demonstrates that such a relationship (desired by many) is at least possible.

We earnestly hope that further studies may give us additional information about the probability of such relationships occurring.

We have one final observation. All of our findings seem to lend strength to Stubbs' (1976) statement that the peer group is "the most powerful linguistic influence on children." There has been much interest in recent years in comparing home and school settings in order to identify "discontinuities" which may exist, and may contribute to children's difficulties in learning to read. In fact, several of the eight sociolinguistic studies funded by NIE, of which this is one, were designed to address that question. The findings presented here suggest that we should not limit our attention to, or even, perhaps, concentrate our attention on, adult-child interactions in the out-of-school setting. Interactions among children in play groups can provide us with valuable information about how communication skills learned in informal settings may affect communicative competence in the classroom. In particular, we need to learn much more about how language reception operates in these two settings. Such research could make it possible for us eventually to help teachers to build classroom discussion processes on children's communicative competencies, rather than on their weaknesses.

LIST OF REFERENCES

Bates, E. Peer relations and the acquisition of language. In Lewis & Rosenblum (Eds.) Friendship and peer relations. New York: Wiley, 1975.

Bellack, A. et al. The language of the classroom. New York: Teachers College Press, 1966.

Boggs, S. T. The meaning of questions and narratives to Hawaiian children. In Cazden, John & Hymes (Eds.) Functions of language in the classroom. New York: Teachers College Press, 1972.

Dumont, R. V. Learning how to be silent: Studies in Sioux and Cherokee classrooms. In Cazden, John & Hymes (Eds.) Functions of language in the classroom. New York: Teachers College Press, 1972.

Elkind, D., Deblinger, J. & Adler, D. Motivation and creativity: The context effect. American Educational Research Journal, 1970, 7: 3, 351-57.

Mehan, H., Cazden, C. B., Coles, L., Fisher, S. & Maroules, N. The social organization of classroom lessons. CHIP Report 67. LaJolla, Calif.: University of California, San Diego, Center for Human Information Processing, 1976.

Morine-Dershimer, G. Who hears whom: Classroom status variables and pupil attention to the comments of other pupils. Paper presented at meetings of the American Educational Research Association, Los Angeles, 1981.

Morine-Dershimer, G., Ramirez, A., Shuy, R. & Galluzzo, G. How do we know? (Alternative descriptions of classroom discourse). Part IV of Final Report of Participant Perspectives of Classroom Discourse Study, NIE-G-78-0161. Hayward, Calif.: California State University at Hayward, 1980. (Obtainable from Division for Study of Teaching, Syracuse University School of Education).

Morine-Dershimer, G., Tenenberg, M. & Shuy, R. Why do you ask? (Interpretations of the question cycle). Part II of Final Report of Participant Perspectives of Classroom Discourse Study, NIE-G-78-0161. Hayward, Calif.: California State University at Hayward, 1980. (Obtainable from Division for Study of Teaching, Syracuse University School of Education).

Morine-Dershimer, G. with Galluzzo, G. & Fagal, F. Rules of discourse, classroom, status, pupil participation, and achievement in reading: A chaining or relationships. Part III of Final Report of Participant Perspectives of Classroom Discourse Study, NIE-G-78-0161. Hayward, Calif.: California State University at Hayward, 1980. (Obtainable from Division for Study of Teaching, Syracuse University School of Education).

Nelson, K. Structure and strategy in learning to talk. Monographs of the Society for Research in Child Development, 1973, 38: 1-2, Serial No. 149.

Philips, S. U. Participation structures and communicative competence: Warm Springs children in community and classroom. In Cazden, John & Hymes (Eds.) Functions of language in the classroom. New York: Teachers College Press, 1972.

Siegel, S. Nonparametric statistics for the behavioral sciences. New York: McGraw Hill, 1956.

Stubbs, M. Language, schools and classrooms. London: Methuen, 1976.

Tenenberg, M., Morine-Dershimer, G. & Shuy, R. What did anybody say? (salient features of classroom discourse). Part I of Final Report of Participant Perspectives of Classroom Discourse Study, NIE-G-78-0161. Hayward, Calif.: California State University at Hayward, 1980. (Obtainable from Division for Study of Teaching, Syracuse University School of Education).

Wilkinson, L. C. & Dollaghan, C. Peer communication in first grade reading groups. Theory into Practice, 1979, 18: 4, 267-74.

Wood, B. S. (Ed.) Development of functional communication competencies: Pre-K-grade 6. Urbana: ERIC Clearinghouse on Reading and Communication Skills, 1977.